

## 9. Neelam

**Program Name:** Neelam.java

**Input File:** neelam.dat

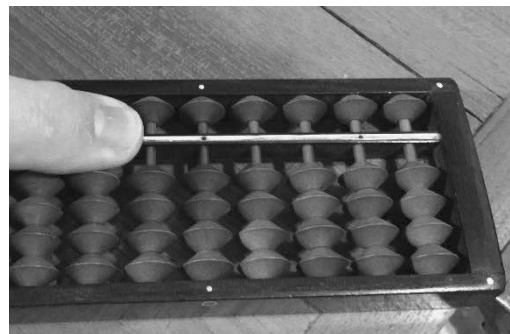
Neelam has been learning about the soroban, a Japanese version of the Chinese abacus, and wants to write a program to visually express different values as they would appear on the soroban. The ancient calculating instrument consists of several rows of beads that slide on rods in two main sections. The top section only has one bead per rod, and represents the value 5. The bottom section has four beads per rod that can slide up or down as needed. There is a middle bar that divides the two sections, and the user of the soroban slides one finger along the bar from one end to the other to “clear” the calculator, forcing all beads to the outside, which represents the value zero.

On the right is a picture of what this would look like.



To express a value, in each row you move as many beads as you need to create the value, as you can see in the picture on the left.

For the value 5, the top bead is moved against the middle bar. For 6, one bottom row bead joins the top row bead against the middle bar, and adds up to 6. Study carefully how 2, 9 and 0 are represented in the same manner.



Neelam needs help visualizing a value graphically, and would like your help to do this by writing a program to show the soroban display using keyboard characters. Using the lower-case letter ‘o’ for a bead, the equals sign for the middle bar, and the pipe ‘|’ symbol for the gaps, write a program to input a value and then display it in soroban format, like this for the value 56290:

```
56290
| | o | o
oo | o |
=====
| ooo |
o | ooo
oo | oo
ooooo
ooo | o
```

**Input:** Several integers values N,  $0 < N < 100000$ , each on one line.

**Output:** For each integer value N, display original input integer and the soroban version of that value, as demonstrated above, showing only the significant columns for the value.

**Sample input:**

```
56290
4371
802
```

**Neelam - Sample output:**

56290

| | o | o

oo | o |

=====

| o o o |

o | o o o

oo | oo

oooooo

ooo | o

4371

oo | o

| | o |

=====

ooooo

ooo |

oo | o

o | oo

| o o o

802

| oo

o | |

=====

o | o

ooo

oo |

| oo

ooo